

# Comparisons of Job Characteristics

**Focus Occupation:** [Computer Systems Analysts \(15-1051\)](#)

**Associated Occupation:** [Computer Hardware Engineers \(17-2061\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 83

**Focus Occupation:** Computer Systems Analysts (15-1051)  
**Associated Occupation:** Computer Hardware Engineers (17-2061)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Computers and Electronics	8.4	22.7	19.3	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	17.2	11.0	<<	Extensive education and/or training may be required
Design	5.2	11.7	8.1	<<	Extensive education and/or training may be required
Telecommunications	3.9	11.6	6.8	<<	Extensive education and/or training may be required
Communications and Media	5.3	10.2	7.7	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 83

**Focus Occupation:** Computer Systems Analysts (15-1051)  
**Associated Occupation:** Computer Hardware Engineers (17-2061)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Complex Problem Solving	9.1	12.6	11.9	0	Current skill level may be sufficient
Active Learning	8.7	12.0	12.6	0	Current skill level may be sufficient
Operations Analysis	5.0	10.5	10.6	0	Current skill level may be sufficient
Science	4.5	9.8	8.0	<	A higher skill level may be required
Systems Evaluation	6.4	9.8	12.7	>>	Skill level is likely more than sufficient
Troubleshooting	4.5	8.3	8.9	0	Current skill level may be sufficient
Programming	2.2	6.1	10.2	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 94			
Focus Occupation: Computer Systems Analysts (15-1051) Associated Occupation: Computer Hardware Engineers (17-2061)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Oral Comprehension	12.5	15.3	13.9	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	14.5	13.9	0	Current ability level may be sufficient
Written Comprehension	11.0	14.2	13.9	0	Current ability level may be sufficient
Inductive Reasoning	10.2	13.6	12.6	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.6	13.2	0	Current ability level may be sufficient
Written Expression	9.8	12.8	11.8	0	Current ability level may be sufficient
Information Ordering	9.9	11.4	12.9	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 82
Focus Occupation: Computer Systems Analysts (15-1051) Associated Occupation: Computer Hardware Engineers (17-2061)		
Work Activities	Exclusivity of Activity	
Communicate technical information	4	
Create mathematical or statistical diagrams or charts	43	
Design computer hardware or software interface	87	
Design control systems	78	
Develop mathematical simulation models	70	
Develop or maintain databases	30	
Develop tables depicting data	33	
Evaluate computer system user requests or requirements	81	
Evaluate prototype computer software systems	89	
Follow data security procedures	77	
Follow data storage procedures	75	
Make presentations	13	
Prepare technical reports or related documentation	22	
Provide technical computer training	82	
Provide technical support to computer users	80	
Test computer programs or systems	78	
Use computer networking technology	81	

Use computer programming language	82
Use computers to enter, access or retrieve data	3
Use knowledge of mainframe computers	78
Use project management techniques	47
Use relational database software	26
Use spreadsheet software	18
Write business project or bid proposals	48

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 80

**Focus Occupation: Computer Systems Analysts (15-1051)**  
**Associated Occupation: Computer Hardware Engineers (17-2061)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Network applications software	1
Operating environment software	12

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.